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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/672,500

09/26/2003

Erwin Behnen

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11/15/2005

Intellectual Property Law Dept.  
IBM Corporation, Dept. 917  
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EXAMINER

DINH, PAUL

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,500	<b>Applicant(s)</b> BEHNEN ET AL.	
	<b>Examiner</b> Paul Dinh	<b>Art Unit</b> 2825	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,18 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,18 and 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) <u>None</u>   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is a response to the amendments + remarks filed on 11/7/05.

The previous allowable subject matter have been withdrawn in view of the amendments + remarks.

Claims 1-2, 18 and 20-31 are pending.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Claim 18 recite a computer; therefore, this feature must be clearly shown in the drawings or this feature canceled from the claim(s).

**No new matter should be entered.**

### ***Claim Rejections - 35 USC § 112***

*The following is a quotation of the first paragraph of 35 U.S.C. 112:*

*The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.*

Claims 1, 18, and 24 and their dependencies are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 18, and 24 are rejected because the limitation “subset” finds no clear support in the specification.

Claims 1, 18, and 24 are rejected because the limitation “allowing a selected subset of one or more latches of the circuit design to exhibit latch transparency while the selected subset is still being modeled as non-transparent by the timing tool” in claims 1, 18, and 24 clear finds no clear support in the specification.

Dependencies of claims 1, 18, and 24 are rejected because they depend from on claims 1, 18 and 24.

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*The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.*

Claims 1, 18, and 24 and their dependencies are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 18, and 24 are rejected because

A. “non-transparent” and “transparent” are not clearly defined in claims 1, 18, and 24.

B. “timing tool models each latch of the circuit design as being non-transparent” is an incomplete claim structure. The claims fail to define how/by doing what and steps/structure necessary to make each latch being “non-transparent”.

C. The limitation “allowing a selected subset of one or more latches of the circuit design to exhibit latch transparency while the selected subset is still being modeled as non-transparent by the timing tool” is an incomplete claim structure, is an unclear, conflicting and contradicting limitation.

C1. It is unclear as to how two opposite operations latch transparency while still being modeled as non-transparent by the timing tool” can be obtained simultaneously.

C2. It is a conflicting and contradicting limitation as to how the same subset (a selected subset/ the selected subset) can be modeled as transparent while (the selected subset is) still being modeled as non-transparent.

C3. It is an incomplete claim structure as to how/by doing what and what steps/structure necessary to achieve this result of exhibit latch transparency while still being modeled as non-transparent by the timing tool.

Dependencies of claims 1, 18, and 24 are rejected because they depend from on claims 1, 18 and 24.

**Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).**

Claim 1 is rejected because it is not clear that “a circuit design” on lines 3-4 and “a circuit design” on line 6 are the same or different. If they are the same, then “the” or “said” must be used accordingly for clarification. If they are different, then first/second must be used accordingly to distinguishing the two.

Claim 1 is rejected because it is not clear what is the relationship between “a circuit design” on lines 3-4 and “a circuit design” on line 6.

Claim 1 is rejected because it is not clear that “the circuit design” on line 7 refers to “a circuit design” on lines 3-4 or “a circuit design” on line 6.

Dependencies of claim 1 are rejected because they depend from on claim 1.

Claim 18 is rejected because it is not clear that “a circuit design” on line 5 and “a circuit design” on line 8 are the same or different. If they are the same, then “the” or “said” must be used accordingly for clarification. If they are different, then first/second must be used accordingly to distinguishing the two.

Claim 18 is rejected because it is not clear what is the relationship between “a circuit design” on line 5 and “a circuit design” on line 8.

Claim 18 is rejected because it is not clear that “the circuit design” on line 11 refers to “a circuit design” on line 5 or “a circuit design” on line 8.

Dependencies of claim 1 are rejected because they depend from on claim 1.

### ***Claim Rejections - 35 USC § 102***

*The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:*

*A person shall be entitled to a patent unless –*

*(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

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Claims 1-2, 18 and 20-31 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Grodstein et al. (USP 5355321)

(Claims 1 and similarly recited claims 18 and 24)

Providing a timing tool (**one or more of:** col 1 line 17+, col 2 line 41+, col 3 line 11+, col 5 line 33+, col 7 line 36+, col 12 line 8+, fig 13) that model a circuit design having latches (fig 1, 8, 11, 15), wherein the timing tool models each latch of the circuit design as being non-transparent (latches as being non-transparent by **one or more of:** imposing/controlling certain delay on latch, i.e., fig 1-3, 7-8, 10-11 and corresponding text, modeling clock signal, clock logic, i.e., fig 6, 9, 11, 13-16 and corresponding text, also col 2, 8-13, insofar the limitation is understood);

Receiving a circuit design in the timing tool (**one or more of:** col 1 line 17+, col 2 line 41+, col 5 line 33+, col 7 line 36+, col 12 line 8+), the circuit design having a plurality of latches (fig 1, 8, 11, 15); and

Allowing a selected subset of one or more latches of the circuit design to exhibit latch transparency (**one or more of:** *col 8 lines 1-60, col 1 lines 46-62, col 2 lines 11-14, col 5 line 51 to col 6 line 4, col 12 lines 7-14*, subset of one or more latches shown in **one or more of:** fig 1, 8, 11, 15, insofar the limitation is understood) while the selected subset is still being modeled as non-transparent (non-transparent by **one or more of:** imposing certain delay on latch, i.e., fig 1-3, 7-8, 10-11 and corresponding text, modeling clock signal, i.e., fig 6, 9, 11, 13-16 and corresponding text, also col 8 line 6+, 2, 8-13, insofar the limitation is understood, also col 8 line 6+ discloses “latch L2 (considered by examiner as a selected subset of one or more latches) , which is now more accurately **modeled as only being transparent**” , insofar the limitation is understood) by the timing tool during modeling of a timing behavior of the circuit design with the timing tool.

(Claims 2, 20, 25) wherein receiving the circuit design having a plurality of latches (fig 1, 8, 11, 15) comprises receiving a list of components and connections to the components (**one or more of:** col 1 lines 28-42, col 3 line 2+, fig 1, 8, 11, 12b, 15, 17) included in an IC (col 1 lines 5-12, 43).

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(Claims 21, 26, 29) wherein allowing a selected subset of one or more latches of the circuit design to exhibit latch transparency includes altering an input signal (to a clock input) to the selected subset of one or more latches (one or more of: fig 1-3, 6-11, 13-16, and col 2, 5-6, 8, 10-13)

(Claims 22, 27, 30) wherein altering an input signal to the selected subset of one or more latches including preventing the input signal from reaching the selected subset of one or more latches at a time that the input signal would have otherwise reached the selected subset of one or more latches (this feature is implemented by one or more of: controlling/adjusting/modeling clock timing/delay, i.e., one or more of: fig 1-3, 6-11, 13-16, and col 2, 5-6, 8, 10-13; controlling/adjusting/modeling arrival time, set-up time, i.e., see or more of: fig 4, col 2, 3, 4, 5, 6, 8, 9, 10, 11, 12)

(Claims 23, 28, 31) wherein the input signal includes a launch clock signal (see or more of fig 1-3, 6-11, 13-16)

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Dinh whose telephone number is 571-272-1890. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Dinh  
Patent Examiner

